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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,959	04/12/2001	Moungi G. Bawendi	01997-273003	2525
26161	7590	03/25/2004	EXAMINER	
FISH & RICHARDSON PC			CHIN, CHRISTOPHER L	
225 FRANKLIN ST				
BOSTON, MA 02110			ART UNIT	PAPER NUMBER
			1641	

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/832,959	BAWENDI ET AL.	
	Examiner	Art Unit	
	Chris L. Chin	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 69-77, 96-114 and 118-133 is/are pending in the application.
- 4a) Of the above claim(s) 97, 100, 102, 103, 105-108, 118, 120, 121 and 123 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 69-77, 96, 101, 104, 109-114, 119, 122, and 127-130 is/are rejected.
- 7) ☒ Claim(s) 98, 99, 132 and 133 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 69-77, 96, 101, 104, 109-114, 119, 122, and 127-130 are rejected under 35 U.S.C. 102(e) as being anticipated by Weiss et al (U.S. Patent 5,990,479) or Weiss et al (U.S. Patent 6,423,551) for the reasons of record.

In response to this rejection, Applicants argue that “neither the ‘479 patent nor the ‘551 patent describes a method in which for each of the members of the plurality of compositions, the nanocrystals of the member of the plurality has an emission spectrum distinct from the other members of the plurality and a quantum yield of greater than 10% in water”. Furthermore, neither the ‘479 patent nor the ‘551 patent describe a quantum yield of a nanocrystal in water, and certainly not for each member of a plurality of compositions.

With respect to Applicant’s arguments concerning the ‘479 and ‘551 patents failing to teach nanocrystals having distinct emission spectrums and “a quantum yield greater than 10% in water”, as noted in the previous office action, the nanocrystals

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disclosed in either the '479 or '551 patents are made of the same materials as the nanocrystals used in the claimed methods and thus will inherently have the same properties as the nanocrystals used in the claimed methods. Applicants have not provided any evidence to the contrary that would suggest that the nanocrystals disclosed in the '479 and '551 patents would not have distinct emission spectrums and "a quantum yield greater than 10% in water" similar to the nanocrystals used in the instant methods.

With respect to claim 109, Applicants argue that "neither the '479 patent nor the '551 patent describes a method in which the compound of the member of the plurality has a corresponding biological moiety distinct from the other biological moieties in the sample and is associated with the nanocrystal by a ligand having at least one linking group for attachment to the nanocrystal spaced apart from a hydrophilic group by an alkyl or alkenyl group".

With respect to Applicant's arguments concerning claim 109, Applicant's attention is directed to column 8 of both the '479 and '551 patents which disclose linking agents for attachment of biological moieties to the nanocrystals. Note that the examples of linking agents shown all have alkyl groups that space apart a hydrophilic group. The examples of reagents/biological moieties that can be attached to the nanocrystals that can specifically bind to the analyte biological moieties in a sample are "distinct" from the analyte biological moieties in the sample, i.e. antibodies specific for analyte antigen in the sample are considered "distinct".

Allowable Subject Matter

3. Claims 98, 99, 132, and 133 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris L. Chin whose telephone number is 571-272-0815. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher L. Chin
Primary Examiner
Art Unit 1641

March 22, 2004